

**REMARKS**

Claims 1-15 are pending in this application. Claims 13 and 14 are withdrawn from consideration. By this Amendment, claims 1-14 are amended, and claim 15 is added. No new matter is added.

Applicants thank the Examiner for the indication that claim 12 contains allowable subject matter. Accordingly, claim 12 is amended to be in independent form.

In the Office Action, claims 1-11 are rejected under 35 U.S.C. §102(e) over U.S. Patent Application Publication No. 2003/0234972 to Simon. This rejection is respectfully traversed.

Independent claim 1 is amended to specify that an optical resonator is formed by mounting a refractive index member on the surface of the body. Additionally, new independent claim 15 is added with this feature and a waveguide formed by providing linearly arranged defects of the modified refractive index areas in proximity to the refractive index member. These claims correspond to claims that were allowed in a corresponding Japanese application over the same Simon reference.

In particular, Simon describes an optical modulator having an optical component 700 (Fig. 7 and paragraph 34) that includes two sections of different refractive indices (section 702 and 704). The optical component 700 is inserted into a cavity 802 of a two dimensional photonic crystal slab (Figs. 8-9 and paragraphs 35 and 36). Simon teaches that, depending on which of the sections 702 and 704 is inserted into cavity 802, the optical modulator exhibits either first propagation characteristics or second propagation characteristics (paragraphs 35-36). Here, the term "propagation" is used in the case where the optical path 120 propagates the optical signal as described in paragraph 23 of Simon. Although the Office Action contends that the optical component 700 in Simon corresponds to the recited refractive index member, Simon has no teaching or suggestion of forming an optical

resonator by mounting a refractive index member on the surface of the body as recited in independent claims 1 and 15. Accordingly, independent claims 1 and 15 and claims dependent therefrom distinguish over Simon.

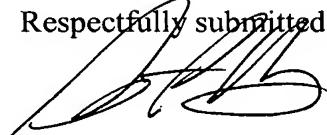
Moreover, "cavity 802" in Simon would not be considered an optical resonator and instead would be understood to one of ordinary skill in the art as merely a hole to insert the optical component 700.

Accordingly, because each and every feature of independent claims 1 and 15 is not taught by Simon, these claims and claims dependent therefrom are not anticipated. Withdrawal of the rejection is respectfully requested.

Withdrawn claims 13 and 14 are method claims that depend from device claim 1. Thus, upon allowance of claim 1, rejoinder and allowance of claims 13 and 14 is respectfully requested. See MPEP §821.04.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 and 15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,  


James A. Oliff  
Registration No. 27,075

Stephen P. Catlin  
Registration No. 36,101

JAO:SPC/ccs

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**OLIFF & BERRIDGE, PLC**  
**P.O. Box 320850**  
**Alexandria, Virginia 22320-4850**  
**Telephone: (703) 836-6400**

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